B. Braun Biosurgicals

Lyostypt®

Superior hemostasis supplied by nature
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Versatility in the OR

Lyostypt® is used for topical hemostasis of capillary bleeding, oozing hemorrhages, bleeding from parenchymal organs and as a supportive measure for other techniques of hemostasis. In hemodialysis, Lyostypt® can also be used for local hemostasis at the puncture site. Lyostypt® offers what is needed:

- very efficient hemostasis
- excellent biocompatibility
- can be applied endoscopically
- can be combined with fibrin glue *
- can be combined with antibiotics **
- only small amount needed thus cost efficient
- swift uptake of liquids
- absorbable

* S. Uranis et al., Laparoskopische Eingriffe an der Milz, Chir Gastroenterol 2004, 20 suppl. 2: 1-8

** Z. Wachol-Drewek et al., Comparative investigation of drug delivery of collagen implants saturated in antibiotic solutions and a sponge containing gentamicin, Biomaterials 1996, 17: 1733-1738
Collagen, a material you can trust

- “Advantages of collagen fleece are fast induction of hemostasis, low tissue reaction, and fast resorption.” *
- “Collagen was shown to be the best overall hemostatic agent in microvascular surgery.” *
- “Voormolen concluded that collagen fleece established faster hemostasis than oxidized cellulose and that it was resorbed faster than oxidized cellulose.” *
- “Direct platelet release stimulation, provides a surface, does not swell.” *

* C. Schonauer et al., The use of local agents: bone wax, gelatin, collagen, oxidized cellulose, Eur Spine J 2004, 13 Suppl. 1: S89-S96
Lyostypt® is an absorbable collagen compress made of collagen fibrils of bovine origin. Lyostypt® is γ-sterilized. It is available in the following packs and sizes.

<table>
<thead>
<tr>
<th>Sizes</th>
<th>Art. No.</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyostypt® collagen compress 3cm x 5cm</td>
<td>1069128</td>
<td>12 pieces</td>
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<tr>
<td>Lyostypt® collagen compress 5cm x 8cm</td>
<td>1069152</td>
<td>6 pieces</td>
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<td>Lyostypt® collagen compress 10cm x 12cm</td>
<td>1069209</td>
<td>4 pieces</td>
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<td>Lyostypt® collagen compress 10cm x 12cm</td>
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<tr>
<td>Lyostypt® collagen compress 20cm x 30cm</td>
<td>1069250</td>
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<tr>
<td>Lyostypt® collagen compress 5cm x 30cm</td>
<td>1069306</td>
<td>4 pieces</td>
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</table>
Collagen also plays an important role within the intrinsic system of secondary hemostasis: "Here, factor XII gets into contact with negatively charged surfaces such as collagen or (in vitro) glass. In addition, further contributors to the activation and effect of factor XII are high molecular weight kininogen and proteolytic enzymes."

Due to these characteristics collagen reduces the bleeding time and the blood loss very efficiently in animal tests, as can be seen in the attached table.


Collagen stops bleeding, not cell growth

As collagen is a physiologic material found in several body tissues, it has almost no negative effect on normal cell growth as can be observed with other hemostatic agents (see attached table).

(Adapted from: D. Heidemann et al., Der Einfluß lokaler Hämostyptika auf menschliche Gingivafibroblasten in Kultur, Dtsch Z Mund Kiefer GesichtsChir 1989, 13: 226-229)

* R. F. Schmidt, F. Lang, G. Thews: Physiologie des Menschen 2005, 525, translated from German

** R. F. Schmidt, F. Lang, G. Thews: Physiologie des Menschen 2005, 527, translated from German